The African pipit enigma

Richard Liversidge

L'identification des grands pipits à dos uni est notoirement difficile. L'auteur estime que les méthodes d'identification actuelles sont inadéquates et que, plutôt qu'aux détails de leur plumage, plus d'attention devrait probablement être apportée au comportement, à la structure et aux mouvements de ces oiseaux. Maintes observations sont incertaines. L'auteur décrit son expérience concernant la description d'au moins une nouvelle espèce de pipit en Afrique du Sud, et donne des conseils aux observateurs désirant perfectionner leurs capacités d'identification de ce groupe d'oiseaux, particulièrement dans la partie sud du continent.

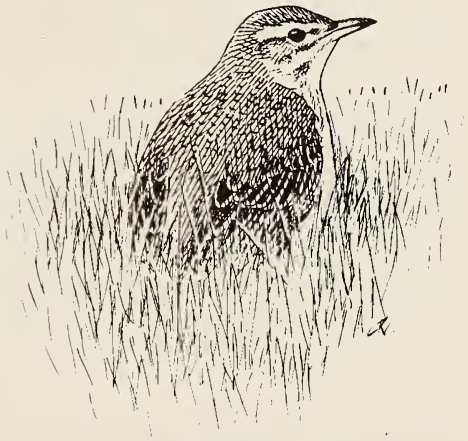
There are a few 'golden oldies' such as myself that were acquainted with ornithologists that knew Africa before 1930: the year of Rear-Admiral Lynes' great monograph *Review of the Genus Cisticola*[1]. Prior to 1930, according to James Chapin (pers.comm.), the understanding of *Cisticola* in Africa was utterly confused. Now at the end of the 20th century, the status of pipits in Africa (and perhaps elsewhere) generates total confusion and nobody understands what is going on! Some species of pipit are easily distinguished but there is a group of larger brown birds that most people guess at.

Evidence for this confusion comes from *The Birds of Africa* Vol 4[5] where the authors recognise two plain-backed species of pipits in southern Africa—Plain-backed Pipit *A. leucophrys* and Buffy Pipit *A. vaalensis*—but only *A. leucophrys* in East Africa. Yet Zimmerman *et al*[6] and van Perlo[7] state that both these species occur in East Africa and both sources differ from each other.

What we need is a major work on pipits covering the whole of Africa and following the example set by Admiral Lynes. There has been a good start by Gary Voelker who is currently completing his thesis with work on DNA analysis of pipits. But we also need fieldwork by people able to see, interpret and distinguish such difficult birds in the field; also to record and produce sonograms of their different flight calls with absolute certainty as to the birds' identification. I say this with caution because there is a sonogram in the *Birds of the Western Palearctic*[2] of a pipit's flight call which I believe may have been incorrectly identified.

It was a challenge that started me off looking at pipits—I was candidly accused of not looking at pipits properly. I accepted this statement because I had seen a flock of 40 pipits that I had not been able to identify. This led—after five years—to finding and describing a new species of pipit in southern Africa[3], the Long-tailed Pipit *Anthus longicaudatus*.

It was an interesting experience first to identify the bird with confidence and then to convince myself



Large Pipit *Anthus* sp.
by Craig Robson

that it was indeed a new species. Complicated by the fact that it was an austral winter visitor to my home patch, I had to wait for months to pass before taking the next step in the process of identification. I was helped by Gary Voelker who encouraged me from his own unpublished work. However, it also added fuel to the fire of confusion on the identification of pipits, because Gary Voelker told me that DNA from a bird which I had identified as Long-billed Pipit *A. similis* was not the same as his Long-billed Pipits.

To add to the confusion, Ian Sinclair *et al*[6] had identified a pipit from the Transkei coast that he called a Buffy Pipit but which I found in the field to be similar to my 'new' Long-billed Pipit. I am convinced that it is not Buffy Pipit, and although we have not yet obtained a specimen, I believe that it may also be a new species!

So, we have confusion in our pipits and almost certainly nobody in southern Africa is looking at pipits 'properly'.

In the wake of these experiences, I have come to the conclusion that we are not looking at the right

characters to identify pipits. Clearly it is not sufficient to examine plumage detail in the way we have been. The proof is that, in looking at pipits in this manner we have not recognised the new species. Part of the problem stems from field guides which as their name implies are only field guides. For birds with distinct plumage characteristics such guides help, but for the difficult groups they are near-hopeless. It has been my good fortune to see and hear birds as individuals which, like the human species, show enormous intraspecific variation. Strangely most birders do not realise there is such variation within species. So each pipit species has several plumages and between species there appears to be considerable overlap. This is apart from geographical differences of size and coloration which confuse the issues still further, as pipits are know to wander widely.

My own experience and fresh approach came from an accident of poor sight. I had five eye operations during the time I was trying to identify the new species. This meant that I was unable to identify pipits using conventional plumage-detail differences. Instead, I was forced to look at body posture and movements, feeding and general behaviour. Also, despite my age—71—my hearing is unusually good and I was able to distinguish some calls either by virtue of their notes or loudness.

Each species of pipit walks in a different manner and has a different foraging style. Each has a different way of pecking its food resource. Some lift their heads between pecks, the Buffy Pipit for example is like a jack-in-the-box. After each peck, its head comes right up and it sticks its chest out. This can be seen and positively identified at 30 m with poor eyes! Indeed it was my familiarity with Buffy Pipit that enabled me to separate Long-tailed Pipit from it. Long-tailed Pipit, in contrast, walks horizontally like a wagtail and wags not only its tail but its whole body up-and-down. This movement is mentioned by Benson *et al*[1] as 'pumping'. No other book seems to mention such behaviour, although it occurs in several pipit species. Such an action is also seen in Plain-backed Pipit but not so frequently as with Long-tailed Pipit.

Most pipits will wag their tail. Some move their whole body, others merely move the tail. Some species flick their tail down as their first tail movement whilst others will first jerk the tail up. It would appear that each species has its own normal behaviour and although all have the capacity to occasionally depart from this and confuse the observer, this is not usually done repeatedly.

Now I am getting to the stage where I can identify most of my local species, including the two undescribed ones, from a distance. Each species walks differently from the others and each has different head-feeding movements. Some walk slowly and deliberately, others have short or long runs. Some peck regularly, others peck almost like a wagtail with alternate steps. At this stage I have video footage of each of these common (and undescribed) pipits and I am trying to quantify their behaviours.

Another aspect of pipits of which we know little is the purpose and function of the different aspects of their anatomy, for example the length of the hindclaw. It was assumed that the very long hindclaw of Long-tailed Pipit meant that the species occurred mainly on short grass and indeed it has been found on the floodplains of northern Botswana on migration (probably to the floodplains in Zambia). The hindclaw of the 'new' 'Long-billed Pipit' is relatively long compared to conventional Long-billed Pipit. Does this new undescribed species also occur on floodplains and if so where does one start to look for it?

What is the meaning of the length of the bill? Why are some primary feathers notched and others not, and what do the differences indicate? Is the outer tail feather pattern a good species indicator or a sex indicator to each other? Indeed, are such tail feathers a reliable and regular feature for each species because there does appear to be considerable intraspecific variation?

As for the commonly used field character of the lower mandible's coloration—yellow or pink—I have photographs of the same individual, one facing left showing a pink lower mandible and and the same bird facing right showing a yellow lower mandible. The same colour differences in the legs can also play tricks through different lighting. At least for me, such characters are not very reliable even when using a telescope which is an essential tool for watching pipits.

Patently one cannot go into the field and hope to identify pipits with the use of a portable DNA-identity kit or a portable sonogram system. Equally plainly, we cannot continue to identify pipits only by using plumage details. The subtleties of plumage pattern differences or otherwise, the size and proportions of the bill, length of leg and even the length of the hindclaw all show clearly that old methods are inadequate for safe field identification of pipits. Yet pipits are able, not only to distinguish their own species, but also to decide whether the other bird is a male or female. If they can do it, we should be able to work out how and follow their example!

Inevitably one must come to the question—what is a species? No matter how difficult it is for humans to distinguish the different species of pipits—and the

DNA of laboratory work will inevitably influence our decisions—we must endeavour to find a new and better system for field identification than presently exists. I do not believe we know how to separate most species in the field and I do not believe many trusted identifications can really be considered reliable. So whilst one can sympathise with Keith *et al*[3], it is wrong that we allow, in this day and age, such an attitude to continue—simply because nobody looks at pipits properly!

Every profession has its idiosyncracies. In avian taxonomy it is that, were it not for the International Zoological Commission (IZC) regulations, I could include in this article photographs of an undescribed species that I shall refer to as the Kimberly Long-billed Pipit. It took a whole winter season to distinguish this bird in the field, so similar is it to both *A. similis* and *A. cinnamomeus* (*A. novaeseelandiae cinnamomeus* in *Birds of Africa*). Finally a specimen helped to confirm the photographs. Alas this omission is perhaps more a reflection on human nature than the IZC.

What we need is sponsorship for a small team of ornithologists to follow Admiral Lynes' example but this time reviewing the genus *Anthus* in Africa. Alas that I were younger and able—but would it not be progress to be able to identify these birds in the field and really understand these little critters?

References

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92 Central Road, Kimberley 8301, South Africa.